King County
Department of Natural Resources and Parks
Wastewater Treatment Division

Water Quality Assessment
Science and Technical Review Team

Meeting #12 – Summary

Date	Thursday, October 29
Time	9 am to 11 am
Location	Video-conference

Meeting Objectives

1. Present key findings from Lower Duwamish Area report.
2. Cue up Science and Technical Review team to review and provide feedback on draft Lower Duwamish Area report.
3. Review next steps.

Science and Technical Review team

- Virgil Adderley, Former Principal Engineer, Portland Bureau of Environmental Services
- Mike Brett, Professor, Civil and Environmental Engineering, University of Washington (in person)
- Jay Davis, Environmental Toxicologist, U.S. Fish and Wildlife Service
- Ken Schiff, Deputy Director, Southern California Coastal Water Research Project
- John Stark, Director, Washington State University Puyallup Research and Extension Center

King County Staff

- Bob Bernhard, Marine Water Quality Planner
- Tim Clark, Water Quality Planner, Lake Union/Ship Canal Study, Bacteria Data Gap Report
- Liz Gaskill, Project Manager
- Martin Grassley, Water Quality Planner, Ecotoxicologist
- Deborah Lester, Supervisor, Toxicology and Contaminant Assessment Unit
- Chris Magan, Water Quality Planner, Duwamish Waterway Study
- Erika Peterson, Community Relations Lead
- Dean Wilson, Science Team Lead, Ship Canal Study

Guests

- Kevin Buckley, Environmental Analyst, Seattle Public Utilities

Consultants

- Tori Varyu, PRR, Note taker

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Meeting Summary

Welcome and confirm agenda

King County staff and Science and Technical Review Team (STRT) introduced themselves and Erika reviewed the agenda.

Present key findings from Lower Duwamish Area Report

Chris Magan presented the findings from the Lower Duwamish Area Report. STRT members asked clarifying questions as Chris presented the findings.

Clarifying questions

Superfund Site

The group discussed King County's role as one of the principle responsible parties for the Lower Duwamish Superfund site. King County explained that the CSO projects outlined in the Consent Decree, which must be completed by 2030 are part of the WA Department of Ecology's source control implementation plan.

A STRT member was interested in how CSO control factors into cleanup of the Lower Duwamish. He raised this question because in Portland Harbor, CSOs were incorrectly blamed for recontamination of the sediments. The project team responded that there have been two cleanups completed in 1999 and 2006 adjacent to CSOs. King County has been able to track recontamination and found the biggest problem was phthalates. King County also has a stringent post-construction monitoring plan that includes measuring sediment quality in the long-term after a project is completed.

In response to questions from STRT members, the project team explained that the Lower Duwamish was designated as a Superfund in the late 1980s for the West Waterway, and late 1990s/early 2000s for the East Waterway. The Superfund sites have primary water contact designations, which are designations based on the amount of time people spend in contact with the water. Primary contact typically mean that people are wading in the water; secondary contact refers to waterways where people are kayaking or doing other recreational activity on the water, but not actually swimming in it. The project team explained that both waterways of the Duwamish are designated as primary contact because there are parks in the area that people use to access the water, adding that primary contact is becoming a larger issue because there has been a movement to give people more access to the Duwamish River.

Monitoring sites

The group discussed how the seven monitoring sites were selected. The project team explained that these are routine monitoring sites within the Duwamish estuary. Some of the decisions about the monitoring locations were made over forty years ago by looking at spatial and local issues at the time. In some cases, they were selected to be above or below an outfall, but some of the outfalls are no longer there.

The group discussed whether the sites in the freshwater section are intended to be ambient or designed to be in proximity to discharges. The project team explained they did not target stormwater or any specific outfalls. The project team added there are no CSO discharges above the estuary, so sampling in this area captures ambient water quality only. There are a few sites below major tributaries, so it is possible to see the influence of tributaries on water quality in some cases.

A STRT member asked if the monitoring site at mile 63 could be considered a reference site because it is so far upstream. The project team explained that while this site is located right below Howard Hanson Reservoir, making it one of the cleaner monitoring sites, it not a reference site. The project team added that they did not use a reference site in the analysis.

Sampling Method

The group discussed how the project team disclosed changes in laboratory methods over time and how that affected data collection and analysis. The project team explained that they made every effort to stay as consistent as possible, but noted that data were collected and analyzed at a variety of different labs over time. The project team added that, in some cases they corrected for changes in analytical methods by comparing the before and after method changes in the data, developing a correlation coefficient, and applying it to the data set. All of these adjustments were documented in the report.

Results

A STRT member suggested that it would be interesting to present the comparison of data to water quality standards as a proportion of exceedance rather than as numbers. Another STRT member suggested that when the report discusses trends, it would be helpful to see the slopes of these trends. He added that it would also be helpful to call out the averages on trend plots to help the reader put the data in perspective.

The group discussed a point that has been raised in past discussions: it would be helpful to add key milestones such as completed CSO control projects or cleanup efforts to the trend plots, so the reader can see how these investments may have influenced the positive trends. The project team explained that they considered doing this in the Duwamish Area Report, but chose to defer discussions of causality to the Synthesis Report.

A STRT member commented that he would like to see r^2 data in the water quality trend plots, to show smaller but still significant trends.

Next Steps and Action Items

- The **STRT** will use the review questions as their guide to provide answers and responses to the Lower Duwamish Area Report for the next meeting on November 12.
- **King County and the STRT** will meet again on Thursday, November 12th at 9am.